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| **S.NO** | **Reference Number** | **Title** | **Methodology** | **Results/Remarks** |
| 1 | 1 | Steganalysis of JPEG Images Using Machine Learning Techniques | This paper presents a steganalysis method for JPEG images using machine learning techniques. Features are extracted using Huffman coding, and various classifiers are trained for detection. | proper training of the ml model, prone to adversial attacks, lack of proper encryption. |
| 2 | 2 | A Steganalysis Classification Algorithm Based on Distinctive Texture Features. | lbp is used to create a feature vector used for svm(text features) | Computational overhead, lack of proper encryption, Requirement for Labeled Data |
| 3 | 3 | A Novel Image Steganography Approach using Multi-Layers DCT Features Based on Support Vector Machine Classifier. | Multi-layer DCT features based on a Support Vector Machine (SVM) classifier. | Limited Embedding Capacity, Detection by Advanced Steganalysis Techniques, chance of overfitting |
| 4 | 4 | Image Steganalysis of Low Embedding Rate Based on the Attention Mechanism and Transfer Learning. | Transfer Learning used to detect the data only in some particular region of an image. | Data Availability and Bias, training a model for detection of low frequency regions is a difficult task, vulnerable to attacks. |
| 5 | 5 | Separable reversible data hiding in an encrypted image using the adjacency pixel difference histogram. | Adjacency Pixel Difference Histogram Calculation, Reversibility. | Limited embedding capacity, Complexity of Implementation, Computational cost, Degradation of image quality. |
| 6 | 6 | An Enhanced Method for Information Hiding Using LSB Steganography. | LSB Replacement, Error Correction Coding. | Limited embedding capacity, Prone to brute force attacks. |
| 7 | ISSN: 2320-088X | Carrier Image Rearrangement to Enhance the Security Level of LSB method of Data Steganography. | Methods such as permutation, shuffling, encryption-based rearrangement, and other cryptographic approaches to alter the structure of the carrier image. | Increased computational overhead, Complexity in decoding. |
| 8 | ISSN: 2088  -  5334  ISSN: 2088  -  5334  ISSN: 2088-5334 | Embedding data in Non-Important Gabor Ridges. | Gabor filters are applied to decompose images into their frequency and orientation components, particularly focusing on ridge-like structures. | It is tough to find out the Gabor Ridges, Limited embedding capacity, Increased computational complexity. |
| 9 | ISSN: 2456-7361 | Highly Secure Method for Secrete Data Transmission. | Threat Modelling, Selection of Encryption Techniques, Key Management, Authentication Mechanism. | Prone to Detection, Vulnerable to Attack. |
| 10 | ISSN: 2320-0804 | A Visual Cryptography Based Data Hiding Technique for Secrete Data Encryption and Decryption. | Identification of Data Hiding Requirements, Designing Encryption and Decryption Algorithms, Security Analysis. | Once the pattern is identified, it is very easy to crack the image, Limited capacity. |